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AUTHOR Travers, Kathleen A.

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ABSTRACT

This paper describes a research study that investigates the nonlinear process preservice teachers experience as they construct and reconstruct their individual teacher identities. By examining the process of preservice teachers who were re-arranging and interpreting their teacher identities within the framework of a university teacher education course and subsequent student teaching experiences, the study analyzes a representative portion of the learning to teach process of the preservice teacher. This research makes explicit the connections between prior knowledge, social context, origins of teacher knowledge, and teacher identity. It also takes into account the dynamic nature of constructing teacher identity by analyzing these constructions from multiple perspectives during the final phases in a teacher education program. The paper reveals the construction of teacher identity of one of the participants in the study, a preservice secondary education mathematics teacher. The structure, content, and experiences of the university classroom affected the process of how he began to make the transition from a student identity to that of a first year teacher. (Contains 29 references.) (Author/SM)

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PRESERVICE TEACHER IDENTITY MADE VISIBLE: A SELF STUDY APPROACH

Kathleen A. Travers

AERA 2000

Abstract

This paper describes a research study that investigates the nonlinear process preservice teachers experience as they construct and reconstruct their individual teacher identities. By examining the process of preservice teachers who were rearranging and interpreting their teacher identities within the framework of a university teacher education course and subsequent student teaching experiences, the intent of the study was to reveal and analyze a representative portion of the learning to teach process of the preservice teacher.

This research makes more explicit the connections between prior knowledge, social context, origins of teacher knowledge, and teacher identity. It also takes into account the dynamic nature of constructing teacher identity by analyzing these constructions from multiple perspectives during the final phases in a teacher education program.

The purpose of this paper is reveal the construction of teacher identity of one on the participants in my study, a preservice secondary education mathematics teacher. The structure, content and experiences of my university classroom affected the process of how he began to make the transition from a student identity to that of a first year teacher. It is these effects and changes that demonstrate the need for teacher educators to realize how preparing teachers who understand themselves as learners and their own learning to teach process, will ultimately create more self reflective teachers and benefit the quality of education they eventually will deliver to their students.

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"All things are filled full of signs, and it is a wise man who can learn about one thing from another."
Plotinus

Introduction

How do you teach a teacher? How within the space of a classroom learning environment do you access moments of self-discovery that preservice teachers encounter as their individual teaching personas emerge? How do you design a research study that captures and analyzes a portion of the nonlinear process, including some of the shifts and ruptures in that process, that prospective teachers experience as they begin to construct, interpret, and rearrange their teaching identities? How do you explore and expose the social, political, gender related, and cultural mechanisms of becoming a teacher and the personal reflections that connect novice teachers' background experiences and knowledge to decisions concerning what and how to teach?

Questions such as these regarding the identification, formation and reformation of how prospective teachers construct their teaching personas have interested me since I made my own decision to "become" a teacher. Building on my personal and professional interests, experiences, and the perceived needs for this type of research in teacher education, my goal was to design and implement a study that examined the ongoing construction of teacher identity during the preservice phase of the learning to teach process.

It is beyond the scope of most research studies, including this one, to either examine or explain the entire construction at any given time of a fully realized or complete teacher identity. However, by exploring the process of preservice teachers' who were rearranging and interpreting their teacher identities within the framework of a university course and subsequent student teaching experiences, my objective was to reveal and analyze a representative and meaningful portion of the learning to teach process of the preservice teacher.

In the next sections of this paper I will briefly discuss intent of my study, the analytical questions I posed in order to examine the learning to teach process of the preservice teachers selected to participate in my research, and the three-part theoretical framework I used to frame and guide my investigation. Following that I will review my methodology and then explore the construction of teacher identity of one of the participants in my study, John (pseudonym) a preservice secondary education mathematics teacher.

Purpose of Study and Analytical Questions

The intent of my study was to investigate what happened within the context of a university teacher education course when greater focus was placed on the teacher as learner. As a teacher educator, I believe there is a direct relationship between what Feiman Nemser describes as "how teachers learn to teach and how they are taught" (1983, p. 166). The structure, content and experiences of my classroom affected the process of how novice teachers learned how to teach. It is these teaching and learning affects and their impact on my students that I wanted to explore and analyze. How did my attempts as a teacher educator to create meaningful learning opportunities that recognized the teacher as learner impact the learning to teach process?

Consistent with many of the current theories in the learning to teach literature that assume that teaching and learning are part of the same process, my research focused on the following three analytical questions:

1. What prior knowledge and experience about education, teachers, teaching, teacher

education, course work, subject area, schools, and learning did each preservice teacher bring to the course? What is the social context of this knowledge?

2. How did this prior knowledge and experience influence the construction and formation of their teacher identities?

3. How were these constructions and formations of teacher identity affected, modified, and or changed as a result of participating in a teacher education course with a central focus on the teacher as learner?

Overview of the Theoretical Framework

The complex process of how prospective teachers learn to teach resides at the very core of teacher education. Until recently, however, the traditional research in teacher education concentrated more on what teachers needed to know for the classroom and how they should be trained to deliver their content (matters external to the teacher) than on how they as teachers acquired knowledge about learning and teaching (Feiman-Nemser, 1983, 1990; and Zeichner 1983; 1996).

As teacher educators we have realized that learning to teach constitutes much more than the development of skills and the collection of theories, and have begun to recognize the importance of understanding prospective teachers as learners (Borko And Putnam, 1996; Feiman-Nemser, 1983; Holt-Reynolds, 1992; Knowles, 1992; and Zeichner, 1993). Among the complex learning to teach scholarly perspectives are approaches that examine the knowledge, attitudes and beliefs of teachers; cognitive studies that focus on the central role of knowledge; research addressing teacher socialization, and methods that analyze the various learning to teach phases (Au, 1990; Barone, et. al.,1996; Calderhead; 1987; Feiman-Nemser & Remillard, 1996; Huberman, 1989; Richardson, 1996; and Zeichner and Gore, 1990).

To further our understanding of the teacher as learner, there have been increasing calls for research to establish how novice teachers connect their learning experiences to their teaching experiences. Taking into consideration the role of the teacher as learner is a relatively new and significant focus of study (Carter, 1990). As Borko and Putnam (1996) note, "just as *successful* [italics mine] teacher education programs take into account the complexity of learning to teach, research that is likely to enhance our understanding of learning to teach must also address this complexity."

In order to explore the complexity of teacher as learner I have developed a three part theoretical framework that attempts to: (1) Focus on the teacher as learner in order to understand, interpret, and challenge the effects of prior knowledge and experience (Vygotsky, 1962; Holt-Reynolds, 1992); (2) Determine the influences and types of teacher knowledge and their social context (Zeichner, Tabachnick, & Densmore, 1987; Borko & Putnam, 1996); (3) Reveal the dynamic and ongoing nature of the process of constructing teacher identity (Britzman, 1991). These three components provide the conceptual framework for my research and for the analysis of my data. In the following sections I will discuss each of these factors at greater length and how they contributed to the content of my work.

The Affects of Prior Knowledge and Experience

Emphasizing the personal side of teaching shifts what has been a trait of some teacher education programs to use the factory model of "mass producing teachers" to viewing the teacher as an active intelligent agent in educating children.

Citing John Dewey's philosophy of learning by doing, Richard Powell writes:

> A teacher education curriculum that acknowledges and accounts for preservice teachers' personal practical experience and knowledge throughout the teacher education program may ultimately help preservice teachers trust their own intuition for preparing and presenting lessons and for using principles of teaching acquired during teacher preparation (p.237).

Inexorably linked with raising teaching to a conscious level are studies that highlight the critical connections between prior knowledge and experience and the formation of identity and learning. students bring to the learning process.

The works of Vygotsky feature prominently in the research concerning the affects of prior knowledge and experience. It is Vygotsky's perspective that teaching behaviors cannot be understood without understanding the thought process of the teacher. How teachers learn corresponds with not only how teachers teach, but how teachers interpret how they themselves as well as others learn. Understanding how teachers learn then helps to recognize and reveal the process prospective teachers go through as they learn how to teach and as they begin to construct their teaching identity. Referring to the importance of prior knowledge in the ways in which people learn and interpret their world, Vygotsky (1962) states:

> No two people have identical temperaments, perceptions and life experiences, the ways one sees, hears, touches, smells, and tastes his world will lead him to a unique point of view and interpretation of the world.... Learning is recursive. When one connects a new idea to something familiar in order to make meaning, he may have to go back and verify it, or else connect the idea to something different and rethink. The processes recur. One may have to distance himself from he concept for while in order to internalize the idea, to make it one's own. (p. 28).

Background knowledge and experience then become a primary determinant of how readers understand the printed text, or to extrapolate from that concept, how new teachers and teacher educators understand their new emerging teaching personas. Just as schemata (Anderson 1984; Alverman and Phelps, 1994) enable people to develop opinions, form generalizations, and acquire ways of acting and perceiving new information in reading, so too does this process relate to how new teachers construct and reconstruct their emerging teaching identities.

In her study, *Personal History Based Beliefs as Relevant Prior Knowledge in Course work: Can We Practice What We Preach* (1992), Holt-Reynolds states that prior knowledge and experience appear to "function to determine what 'good' teaching should look, sound and feel like" (p. 25). Her findings confirm that preservice teachers come to teaching with powerful past histories and experiences that create recursive "parallel mirrors" as new information is interpreted and acted upon, eventually forming new patterns of thought and behavior. Holt-Reynolds suggests that teacher educators must use practices that not only encourage preservice teachers (and teacher educators) to explore their prior knowledge, beliefs, and experience, but to then challenge these beliefs and practices to foster growth and learning as a teacher. Thus, focusing on the teacher as learner, in part becomes a process of understanding, interpreting, and challenging the prior knowledge and experience of the learner, the teacher, and teaching.

Teacher Knowledge and Social Context

Given that my study would focus on the teacher as learner, and would investigate the affects of prior knowledge and experience, the next factor was to consider how these elements contributed to the emerging teacher knowledge of the preservice teacher. Teachers' knowledge about their students, about teaching, about their subject matter, and about learning are the principle components of their thoughts behind the actions of their teaching. For this study it was important to not only concentrate on prior knowledge and experience, but also to make a distinction in how these elements determined teacher knowledge and teacher action. Since my study sought to understand the formation of *teacher* identity, it was essential that I analyze the *teacher* knowledge of each of the preservice teachers in my study.

In their article, *Individual, Institutional, and Cultural Influences on the Development of Teachers' Craft Knowledge*, Zeichner, Tabachnick, and Densmore review research on various aspects of teachers' "professional" or "craft" knowledge. Their article traces the development of this knowledge and concludes that teachers' knowledge is complex, at times inconsistent, ever changing, and should be viewed as an "interpretative framework" or "series of implicit theories" through which new teachers associate or connect new meanings and understandings to their existing attitudes, beliefs, and perceptions. It is this "interpretative framework" that new teachers are frequently unaware of, that largely determines their "perspectives" and emerging teacher identities. This "interpretative framework" is also critical to the understanding of how teachers construct and reconstruct their teacher identities as new information or new environments become part of their experience. 'Unpacking' this interpretative framework was a crucial element in understanding the nonlinear process of how teachers construct their identities. Understanding and determining the framework for each student in this study became an important phase in the analysis of each participant's teacher identity.

Expanding on Zeichner, Tabachnick, and Densmore's work, as well as the studies of other scholars examining teacher knowledge, Borko and Putnam's chapter, *Learning to Teach* reviews the literature on teachers' knowledge and beliefs. According to Borko and Putnam, "the central focus of cognitive psychology is the mental life of the individual" (p. 673). In other words, cognitive psychological approaches concentrate on both the content and process of thinking. Attempting to understand how teacher thinking determines how individuals learn to teach, Borko and Putnam consult a variety of cognitive studies (Eisenhart & Borko, 1993, Putnam, Lampert, & Peterson, 1990; Resnick, 1989).

From the research in this tradition, Borko and Putnam develop what they consider to be the three most significant constructs of teacher learning: (1) the role of knowledge (2) All learning is active and constructive and (3) knowledge is situated in both context and culture. As in the teacher socialization research (Lortie, 1968, Zeichner and Gore, 1990), prior knowledge, experience, and predisposition to what constitutes learning determine current thought and action. Thus, insight into teacher thinking and teacher knowledge depends on the recognition of prior thought and experience.

Using the three constructs mentioned in the preceding paragraph, the authors create a framework for analyzing teachers' knowledge consisting of three domains that pertain to teacher thinking and practice. The first domain, "General Pedagogical Knowledge and Beliefs "encompasses a teacher's knowledge and beliefs about teaching, learning, and learners."

Included in this category are thoughts about classroom management, instructional strategies, and learning environments. "Subject Matter Knowledge" is the second domain which constitutes "knowledge of a subject or discipline" and differs from the third domain, "Pedagogical Content Knowledge" which deals with "knowledge of a subject that is specifically related to teaching" a subject. These last two domains are especially relevant in my study of secondary teachers who learn to identify their teaching in terms of their content area or discipline, and the teaching methods that closely associated with that discipline. Determining these forms of knowledge and how they contributed to the "interpretative framework" and formation of teacher identity, became critical to my analysis of the learning to teach process. I used these categories to help understand the nature of each of the participants teachers' knowledge.

The Ongoing Process of Constructing Teacher Identity

Just as schemata remain in flux and ever-changing, so do the constructions of teaching identities and perceptions of teaching remain fluid and characterized by shifts in perception and action. Therefore, an important part of my research is an attempt to make visible the shifts in identity and perception. A distinguishing characteristic of my study was my decision to make the five students in my class aware of how they construct and reconstruct their teacher identities or what Kaster and Ferraro refer to as raising "teaching to a consciousness that was intentional, not just implicit." Raising the awareness of teaching to a conscious level not only meant establishing a learning environment to examine this awareness, but to also creating classroom spaces to interpret and analyze the complex and recurring linkages of the "who" they were as teachers to the "what" and "why" of choices they made about teaching.

Deborah Britzman's *Practice Makes Practice* (1991), is an ethnographic study that examines the "contradictory realities" of secondary teachers as they struggle to find their voice and identity as teachers. Britzman's study examines the multiple meanings, interpretations, processes, levels of consciousness and awareness, of teachers learning to teach. She asserts that for teacher education to focus solely on the skills of teaching and the structure of schools while ignoring the identity of the teacher who practices those skills and exists within those structures, is to disregard the very process of education itself. As Britzman writes:

> Enacted in every pedagogy are the tensions between knowing and being, thought, and action, theory and practice, knowledge and experience, the technical and the existential, the objective and subjective. Traditionally expressed as dichotomies, these relationships are not nearly so neat or binary. Rather, such relationships are better expressed as dialogic in that they are shaped as they shape each other in the process of coming to know. Produced because of social interaction, subject to negotiation, consent, and circumstance, inscribe with power and desire, and always in the process of becoming, the dialogic relations determine the very texture of teaching and the possibilities it opens. (p. 2-3).

Only when you allow for classroom spaces that invite the exploration of a "double consciousness" as it relates to teaching and teacher identity, will you be able to unlock the possibilities of education. Research that intends to examine this process of becoming, must then exist within a state of fluidity, and be responsive to the recursive and inherently complex and ongoing aspects of teachers, who as learners, are constructing and reconstructing their identities. to construct their own teaching styles.

Research Context-Reading in the Content Areas-The Course

In the fall semester of 1996 I taught a course in reading offered as part of a teacher education sequence for preservice teachers seeking certification in middle/ secondary education. The course, "Teaching Reading in the Content Fields" was designed to satisfy state educational guidelines for teacher certification and was a required course for students in the middle secondary education program. From the outset of the course I had three main goals which were: (1) Ensuring students were taught course content; (2) Establishing a classroom environment that focused on students as learners; and (3) Responding to my students and their needs while maintaining both teacher and researcher perspectives.

Data Sources

For the examination of teacher identity, it is not enough to simply identify a preference for a teaching style or methodology. Applying the theoretical concepts of my conceptual framework, my aim was to analyze which experiences and prior knowledge seem to influence the development of teaching identities and decisions of how to teach. For the success of this study I needed to explore various forms of communication (e. g. writings, conversations, student presentations) to analyze and evaluate the conscious and the not so conscious choices new teachers make about teaching.

I used all the written assignments, journal entries, e-mail chats, exams, papers, class teachings, student teachings and presentations, class discussions, reading responses, as well as audio tapes of each class meeting. These audio tapes captured both the responses to class material as well as spontaneous discussion of other topics related to teaching. I also collected responses to some informal course evaluations and feedback requests, as well as a wide variety of free write assignments.

I conducted follow-up interviews near the completion of their student teaching semester. Each of these interviews lasted several hours and were audio taped then transcribed. Included in these interviews were numerous prearranged questions, as well as several questions that asked students to reflect on the course and the impact it may have had on their student teaching experience. I also included questions pertaining to actual journal entries, and class assignments made during our course to determine possible changes or shifts from ideas expressed earlier.

Example of Course Content-Bourdieu-Concept of Habitus

While each week's class contained substantial material on reading strategies, literacy theories, and motivating students to read, I continued to provide readings to inspire reflective learning. In week six, I asked students to read Randal Johnson's "Editor's Introduction Pierre Bourdieu on Art, Literature, and Culture" from the book *The Field of Cultural Production* (1993). I didn't give students any advance notice of how challenging this reading might prove to be from their frame of reference, nor did I call attention to why I wanted them to read it.

When the students returned the following week, all of them complained about the Bourdieu reading. "This stuff is unreadable," someone said, while another person said he quit reading the article after page eight because he didn't understand what it was about. Assigning this article was typical of the multi-layered pedagogical intentions I had for most of my teaching. I wanted students to read this article for the ideas I knew we would discuss, but I also wanted them to experience what it felt like not to be able to read something and have the frustration and resentment one might experience toward the assignment and for perhaps for reading itself. In

addition, I wanted students to access their own learning behavior and confront their own learning styles as they read the article.

This assignment prompted one student to suggest that learning was like movement along a continuum, it never remained in the same place and what one sometimes appeared to know, and possibly take for granted (e.g. how to read and comprehend what was read) depended on the perspective one had. In other words, what one thought they knew and thought they had learned could and did change. If learning was on a continuum, as this student suggested, then what were the implications for teachers? What do teachers need to understand about their own learning continuum?

The other reason I assigned this article was to present and discuss Bourdieu's concept of *habitus*. As previously discussed in Chapter One, *habitus* is a socially constructed principle of perception which influences action. People do not operate in a cultural, social, economic, historical, or psychological vacuum, they exist within "concrete social situations" that effect their actions. Each one of us has his or her own habitus that determines our actions. This is particularly important for preservice teachers because understanding the concept of *habitus* helps them to understand the connections between their ideas and their prior knowledge and experience, teacher knowledge, interpretative framework, and social context that each of them brings to the teacher education classroom. After we got past the resistance to reading the article, the concept of *habitus* become an ongoing term for understanding our social and cultural connections to prior knowledge and experiences and our choices to act.

John's Learning to Teach Story

For the remainder of this paper, I will focus on John, one of the participants in my study, and the process he experienced as he began to identify and form his teaching persona. Using the three analytical questions mentioned earlier I will discuss John's initial perspective as he entered my class and what changes he made throughout the course and during his student teaching semester.

John was from a small town and as a result of his early successes in school, rose to the top of his class at a young age. John was valedictorian of his high school, actively participated in all aspects of school life, learned how to learn, excelled in school subjects, and possessed a unique talent for mathematics. Like many others who were the academic stars of their home towns, John accepted a four year scholarship at one of the premier universities in the country located in his home state, with a perfect grade point average, and an overall respect and belief in teachers, studying, and school.

John's exceptional talents in math also brought him early recognition in the forms of offers to attend programs in Engineering, or Actuarial Science from other very distinguished universities world renowned for their academic reputations in mathematics. While John's desire to teach remained strong, his parents exerted considerable pressure over him to consider one of these universities. Attending one of these universities they thought, would empower John to earn the large sums of money that often accompanied the prestigious and talented mathematicians who graduated from such institutions. So far, John had resisted these mounting pressures. When John entered my class, he wanted to become a teacher in order to "give back to students the quality of education" that he had received.

John's Initial Perspective-Positioning His Prior Knowledge and Experience

John's perspectives of education, teachers, and teaching, were heavily influenced by many positive school experiences and the teachers who eventually became his role models. John considered himself "blessed" by having had so many talented teachers. One teacher in particular, his high school math teacher, "stood out" because he "gave up" so much of his time to help students with math. John interpreted this extra time as not only helping students learn about math, but as his teacher's dedication to teach adolescents how to succeed later on in life.

In contrast, John's views about his teacher education course work were not as positive. He felt many of his teacher education classes had not addressed his needs for becoming a teacher. On the first evening of our class, in response to my question as to why he took this reading course, John candidly answered, " I took this course because we have to. Other than that, I'm not sure why future math teachers need to take a course in reading strategies." I think John felt this way about much of his course work, he took it because he "had to." For John, our class represented just one more required grade towards earning his teaching degree.

Social Context of John's Experiences

From John's perspective, his general education experiences prior to college had been overwhelmingly positive. John believed in school, in his teachers, and most importantly in his ability to learn and succeed in school. In contrast, John's university classes at times consisted of large lecture halls full of students which afforded little to none one on one interaction with his teachers. Unlike his public school experience, John's college experiences were distant and impersonal.

John's university mathematics methods course had been unimaginative, and had left John eager to begin his field experiences. A significant portion of John's perceptions about his teacher education program came from his interactions with other secondary math students, who viewed their teacher education course work as lacking in substance and content. Entering my classroom John had low expectations of the course, and depended upon his peers for much of his social awareness and context of what being a teacher and teaching really meant.

In John's final practicum, he met a mathematics teacher who while traditional in his teaching approaches, demonstrated a respect for mathematics. What John admired most about his cooperating teacher was that he encouraged John to develop his own teaching style. Because of the strong relationship between John and his cooperating teacher, he lobbied for, and was granted, a rare chance to continue to work with his practicum teacher during his student teaching semester.

Once John began his student teaching, his perspectives about school and his subject were again heavily influenced by his cooperating teacher. As the semester progressed, John felt some of the compromises he observed his cooperating teacher make (e.g. lowering expectations for students who missed large amounts of time in school) disturbed him. John resisted this socialization of lowering standards preferring to keep his standards high and in part maintain his idealism about school and the appeal of mathematics for adolescent learners.

John's Initial Teacher Identity

In a written response to my question, "Who Am I As A Teacher?" John's answer was similar to other secondary education preservice teachers who initially viewed who they were as teachers through the interpretive framework of their subject matter. In John's words:

> *Who am I as a teacher? A question like this cannot simply be answered by one word, such as reformer, although this could be one word that describes my*

attitude. For me, math has not been a subject or a science, but a way of thinking. When I encounter problems, I tend to use the thinking skills that I have acquired from my mathematics instruction to attack the problem

Even perspectives on other educational concepts were filtered through content areas. One of the interactive forms of communication throughout the course were dialogue journals. The passage below was taken from one of the entries in John's journal:

Multicultural education is somewhat of a quandary for me. My own personal beliefs are that everyone should have an equal opportunity to learn in my classroom, regardless of social, racial, or economic background. However, How am I going to implement my own personal beliefs and the broad issues of multiculturalism into my classroom remains a mystery to me. I do, however, plan to use some ideas concerning the global economy in my mathematics instruction. I like to use ideas with the different currencies around the world and how to find conversion rates and the values of currencies.

John's teaching identity was framed by his content area, and any new information about teaching, pedagogy, or other educational concepts, was interpreted through his perspectives about his specific content area, math. Although John admired teachers for their dedication and desire to help students, it was in the teaching of their content areas John believed, that really distinguished their efforts as educators. Recalling Borko and Putnam's three domains of knowledge, John's ideas about who he would be as a teacher were connected and interwoven within his content area. For John, the content and pedagogy of math, represented a significant part of his knowledge, beliefs and attitudes about teaching, education, and teacher identity.

Changes in John's Perspective and Teacher Identity

Since it had been my intention to place greater emphasis on the teacher as learner, reflecting on how teachers think and learn became an integral component of course content. For John, this focus provided an initial connection to math, but later afforded several opportunities for him to communicate more about who he was as a teacher apart from his content area. It also enabled John to discover and finally articulate one of the reasons he chose teaching over the more financially lucrative calling of other careers, his own personal experience with failure.

On most evenings after our class it was typical for students to continue discussing their ideas long after the scheduled time for our class had ended. John was one of the students who consistently remained after class to talk about teaching. One evening, John decided to share one of the most important learning lessons of his life. He began by telling me about the pressures he was feeling to pursue other careers in mathematics, given his talents and abilities in math. John explained that these same pressures were the reason why, he had "flunked out" during his first year of college. For a class valedictorian, and an honor student who had earned record scores on his entrance exams, and achieved a perfect grade point average, this experience had delivered more than a minor set back in his college life. It had also increased both the anxieties and pressures of his parents. John admitted that the pressure to relinquish his dream to become a teacher in favor of a career in engineering, had caused him to unexpectedly rebel against that which came so easily to him, earning top grades, and succeeding in school. New to academic failure, John's sense of loss was almost overwhelming and had drastically changed his perceptions of who he was, not only as a preservice teacher, but as a learner. It took John an extra

year to recover. Initially he transferred to another institution in the state and worked diligently to improve his GPA in hopes of returning to his original university. After applying more than once to be readmitted, he was finally accepted into the secondary math education program. In examining his own identity first as a learner, then as a prospective teacher, John realized that it was not only his school successes in learning, but his experience with school "failure" that had influenced his desire to become a teacher. His choice to teach was not as he had first thought, primarily due to his exceptional talents and interests in math. After this experience, John knew what it was like to not excel as a learner and to not experience success in school. John was unable to understand this experience fully until he thought seriously about himself from the perspectives of both a teacher and a learner. His self- reflections helped him gain a clearer understanding and awareness of what motivated him to pursue a his choice to become a teacher. From this understanding, John's perspective of himself as a teacher changed. Towards the end of our course, John chose to openly share these experiences and thoughts with the rest of the class. John's interpretive framework had expanded to include ideas about learning, schools, and teaching that were not always embedded in his content area. John was beginning to alter his initial perspective to now view teaching as separate from his subject matter. He had realized that pedagogical concepts were not solely dependent upon the specific discipline or content the teacher.

John's Student Teaching Experience

At the beginning of his student teaching experience, John now described who he was as a teacher as "I guess I would like to classify myself as a teacher of thinking, with a mathematical context, rather than a mathematics teacher." After taking the course, John knew more about who he was a teacher, and understood more about what the process of becoming a teacher meant to him. Feeling much less pressure to pursue jobs in engineering, John concentrated on his teaching. One of the other changes John made during our course was to focus more on his *students'* learning, as he wrote in his journal:

> Most students will not need to factor polynomials after high school, but an understanding of how the process works, forward and backward, can help teach students higher order thinking skills that will be valuable no matter what occupation they choose.

Like his high school math teacher, and role model, John also wanted to help his students succeed in life. After our course, the difference in John's "General Pedagogical Knowledge and Beliefs" was that he now viewed himself as a teacher of thinking within the context of mathematics instruction. His "Pedagogical Content Knowledge" had also changed. For example, John decided to incorporate dialogue journals in his math classes as a way of communicating with students about their learning, and about how they were responding to math. Although John's method's instructor and his cooperating teacher had not used this teaching strategy, and had raised some concerns with him about having math students write journals (this might be something more suited for English classes John was told), John felt fervidly about the need to understand his students as learners. Having explored his role as a learner and as a teacher, John now felt much better prepared to understand and more willing to focus on the learners who were his students. While John continued to speak well of his cooperating teacher, he had become disappointed in what he perceived was this teacher's inability to reach all students. Feeling the pressure of his

idealism, and clinging to his own attitudes about in school, it was difficult for John to relinquish his beliefs that everyone could benefit from seeing mathematics as more than a drill and practice subject centered on questions with "correct" solutions. John's socialization process into the "real"world of teaching in the public schools, made him uncomfortable at the prospect of not reaching everyone he taught. More than just a discrepancy between theory and practice, John was realizing that his perspective of himself as a learner differed sharply with many of the students he taught. Instead of enjoying school, and being socialized into the positive effects of education, many of his students hated school, continued to resent mathematics, and didn't particularly care about learning.

Influences of Taking the Course on John's Identity

In our follow-up interview held toward the end of John's student teaching, John discussed the impact our course had on his teaching and his teaching persona. Focusing on the teacher as learner had effected John's emerging teaching identity in significant ways. As mentioned earlier, John no longer viewed teaching entirely through the his content area. John's new interpretative framework also meant a change in his approach to teaching math. He now reflected more about his students as learners, on how they had learned math, and the range of success they had previously experienced in solving mathematical problems. For some of John's students math meant arithmetic and the memorization of equations that many felt they would never use. John quickly learned that many of his students had not enjoyed the enlightened mathematics teachers he had as teachers, nor the variety of methods he had been taught for appreciating math. For John, who had always viewed math as a powerful thinking approach to problems, seeing students struggle and strongly dislike anything associated with the subject, caused him to recall the concepts in our class that helped him analyze his own learning. In order to teach math, John had to reach his students as learners and confront their strong opinions of the subject before any of them could even begin to understand the benefits of learning math. Once John recognized the learning potential of each student, he could connect it to the content of math in relevant and student-centered possibilities. After taking our course and understanding the importance of teacher as learner, John's teacher identity changed to reflect a teacher of thinking, someone who was learner centered and who taught mathematics.

Conclusion

As previously discussed, Holt-Reynolds suggested that teacher educators must use practices that not only encourage preservice teachers to explore their prior knowledge, beliefs, and experience, but then to challenge these beliefs and practices to foster growth and learning as a teacher. John's realization that his role as a learner was just at important as the influences of his content area in determining who he was as a teacher challenged his perspective of education, teaching, and teachers.

In some respects, John's perceptions of himself as a learner dominated his views about his content area, school, and his perceptions about his abilities to teach. While John did not assume every student respected math, the indifferent attitude about learning on the part of some of his students surprised him. Realizing that his successes at math motivated his desire to teach was only a starting point for John's realizations about the learning styles of his students as they now approached John's mathematics lessons. While focusing on John as a learner in the course had expanded his perspectives about his own learning, he still needed to understand the multiple

perspectives and style of learning of his students.

However, focusing on the role of teacher as learner in one course in a program is not enough to significantly impact teacher education. Focusing on the teacher as learner must be a goal of programs of study in teacher education. For John, the focus on learning in a course was a significant step in his understanding of himself as a teacher. Having only examined this focus in one course at the end of his program, did not enable him to gain further insights about his role as a teacher. As Feiman-Nemser and Remillard state:

> ...knowing what good teachers do, how they think, or what they know, is not the same as knowing how teachers learn to think and act in particular ways and what contributes to their learning. Researchers, policy makers, and teacher educators are beginning to recognize that understanding more about teachers as learners, what they need to know and how they learn their craft, can help in clarifying the role for formal teacher education in learning to teach (p.63).

In other words, only when we understand ourselves as learners, can we begin to understand ourselves as teachers. And only when we create multiple opportunities within our teacher education programs to explore the teacher as learner, will the power of this focus be realized by preservice teachers and ultimately by their students.

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